

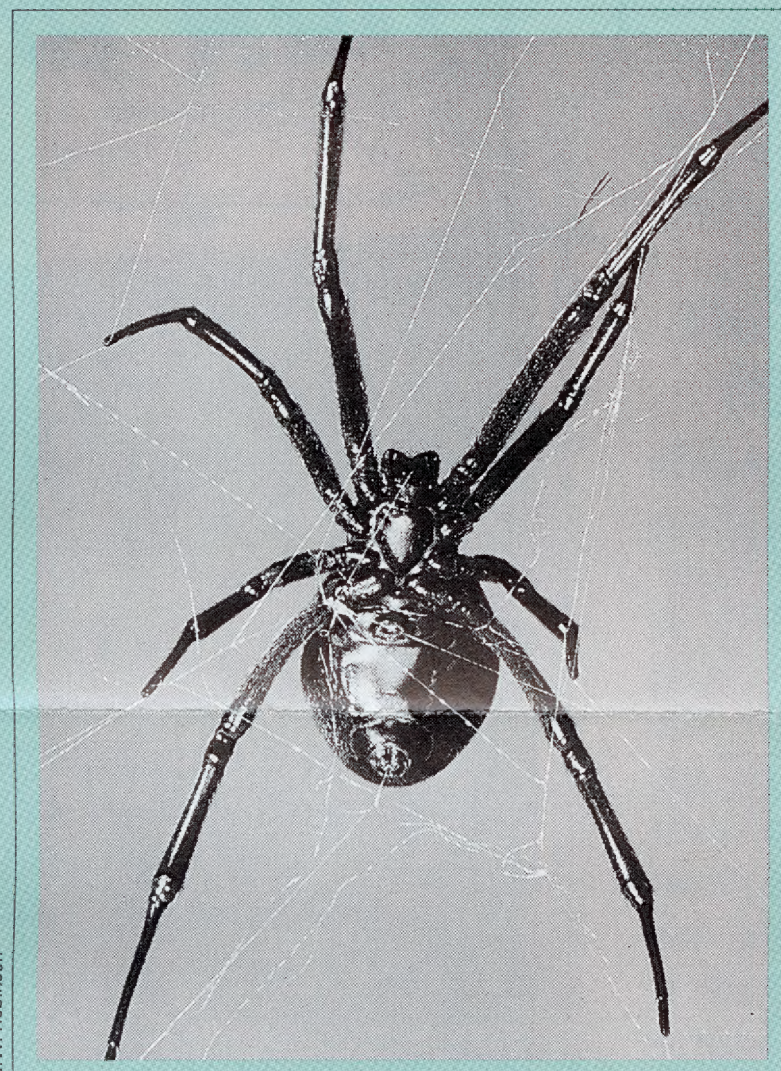


ACADEMY

Newsletter

MEMBERS MEETING

SOCIABLE SPIDERS



G.W. Robinson

with Dr. Charles Griswold, Academy Arachnidologist
Wednesday, November 16, 2 p.m. and 7:30 p.m.

Curator of the Academy's department of Entomology, Dr. Charles Griswold will show how aggressive and cannibalistic spiders manage to make peace and mingle together for brief periods in their lives to propagate. On the other hand, he'll tell us about spiders that spend their whole lives cooperating to build shelter, capture prey and to provide for their mutual defense as part of an integrated spider society. He also will discuss the animals who manage to live in and around the spider society, making a living at the spider's expense.

The Academy Store will be open for your convenience, before and after the program.

Please present your membership card at the Academy's entrance and again at the auditorium. This members meeting is provided as a benefit of membership and thus is only open to members of the Academy.

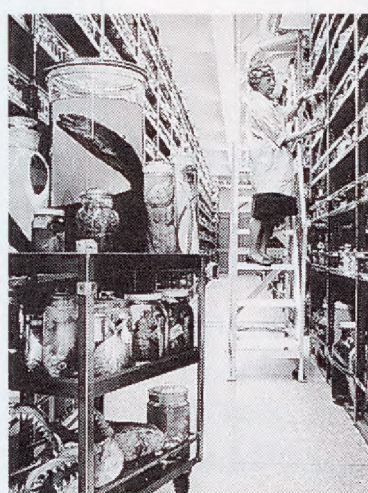
spider 1. any of an order (Araneida) of arachnids having a body with two main divisions, four pairs of walking legs, and two or more pairs of abdominal spinnerets for spinning threads of silk used in making cocoons for their eggs, nests for themselves, or webs to catch prey.



GRANTS SUPPORT RESEARCH AND COLLECTIONS

The Academy continues to seek and be awarded grants from national and international sources in support of research activities and maintenance of the natural history collections. Last year the Academy received more National Science Foundation (NSF) support for our specimens than any other institution. Overall since NSF began its support for natural history collections, the Academy ranked second (only behind Harvard University) in obtaining NSF support for its valuable holdings.

Here's a sample of grant support of some very important projects. Ornithology and Mammalogy, Dr. Baptista; vocalization and fitness in white-crowned sparrows (NSF). Entomology, Dr. Pulawski; describe the sphecid wasp fauna of Africa and study their phylogenetic (NSF).



Susan Middleton

Entomology, Dr. Griswold; describe the spider fauna of afro-montane regions of east Africa and study the evolutionary relationships of groups (NSF). Invertebrate Zoology and Geology, Dr. Kociolek; to support an international workshop on freshwater diatoms and their use in reconstructing paleoclimates (NOAA) and to produce a database of the freshwater diatoms of the United States (EPA). Ichthyology, Dr. Iwamoto; to collaborate with the British Museum on deep sea fishes from New Caledonia (NATO).

In addition, this year all but one of the research departments has national foundation support of the collections. This support ranges from the National Endowment for the Humanities in the Anthropology collection for new cabinetry to NSF support in Invertebrate Zoology and Geology for the computerization of their important holdings. Similar NSF grants are now in place in Ichthyology, Botany, Entomology (in the third year of a five-year, \$1 million NSF grant), and Ornithology and Mammalogy.

FROGS, SNAKES RECEIVE NEW HOME

A prominent feature of the aquarium since 1923, the Swamp's moist, tropical atmosphere requires an occasional renovation, and through the generosity of donations by William Friesen II, the Four Spring Water Company, and Walter Haas III, it is nearly complete. The east

panel reptile displays have been rebuilt,



Susan Middleton

the gardens have been replanted, and new residents are on the way.

Ken Howell, the aquarium's chief herpetologist, plans to ultimately maintain a family of American alligators along with alligator snapping turtles, water plants, and fishes that one would encounter in the southeastern swamp. The large bull (that's croc talk for male — females are called cows) is awaiting a cow or two and the previous crocodiles and alligators have been relocated to larger facilities.

Work on the Fish Roundabout continues. After 18 years of continuous operation, this spectacular aquatic display is receiving an overhaul — repair, renovation and plumbing!

MEMBERS CAN GET A LIFT

For those members who take the bus to evening members meetings, we will provide a ride from the Academy to your MUNI stop following the evening meeting. Please call ahead to make arrangements, at 750-7111.

After the Big Splash

Lecture Series: The impact of Comet Shoemaker-Levy 9 with Jupiter last July was one of the most widely viewed events in history. Minutes after data were obtained, they were shared via the Internet with striking images depicting tremendous disturbances as piece after piece of the comet plummeted into the atmosphere of the planet.



What can interpretation of those images tell us about the nature of those cometary fragments? Were there clues to the composition of Jupiter's outer atmosphere? Have we changed our views on the probabilities of such encounters occurring throughout the solar system, particularly in the neighborhood of planet Earth?

Dr. David Morrison, chief of the Planetary Science Division of NASA-Ames (no relationship to the planetarium's Alexander F. Morrison), will present preliminary results in this lecture presented at 7:30 p.m. and again at 9 p.m.

This third program of the Fall 1994 Benjamin Dean Lecture Series is co-sponsored by the Planetary Society. (The next lecture in the series will be on Dec. 6, with Dr. Carol Stoker.)

Tuesday, Nov. 15 — 7:30 p.m. & 9 p.m.
Tickets \$2 each

For advance tickets, use the order form. Tickets are available at the door on standby basis. Call 750-7141, for more information.

The Christmas Star

Feature Sky Show: Amid the festivities of the season, gaze upon the wonders of a winter night: star clusters, nebulae, red giants, white dwarfs and more, are there to be seen. Then explore the mystery of all the legendary star-like objects, which are said to have appeared in the sky 2,000 years ago to herald the arrival of a new age. This annual favorite opens Dec. 2 and continues through Jan. 8, playing at 2 p.m. weekdays/2 and 4 p.m. weekends.

"Extremes" Ends November 27

Current Sky Shows: The feature show, "Extremes," exploring the biggest, farthest, fastest and hottest, ends Nov. 27. The planetarium will be CLOSED for show changes from Nov. 28 to Dec. 1. It will reopen Dec. 2 with the new feature show, "The Christmas Star." The planetarium will be open on Thanksgiving day with an extended sky show schedule. The show, "Impact!" has been extended through Jan. 8.

Sky show tickets can be purchased a half hour before the show at the planetarium's box office once inside the Academy.

November Schedule

Sky Show / Description	wkday	wkend
Extremes / cosmic record holders (closes Nov. 27)	2 p.m.	2 & 4 p.m.
Impact! / celestial collisions	—	1 & 3 p.m.
Star Talk / tour of the night sky	—	12 p.m.
Touch the Stars / a family show	—	11 a.m.

For more information, call 750-7141.

THE CALIFORNIA ACADEMY OF SCIENCES PRESENTS.



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5K RUN OR WALK SUNDAY, NOVEMBER 13

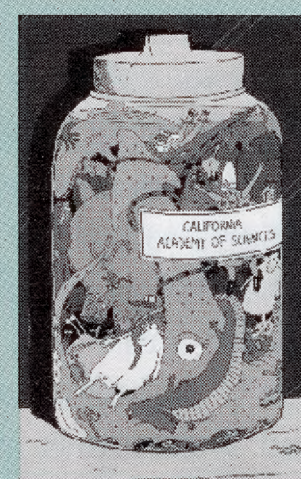
Pull out your running shoes for the popular T-shirt with an original design to celebrate the 10th anniversary of Run to the Finish. On Thanksgiving weekend, this year's race is starting at 8:30 a.m. Show off your new T-shirt.

Dressed as your favorite Gary Larson cartoon character, that he will most likely attend for the 10K run.

This tribute to Larson's zany cartoon characters is a part of environmental education and research programs that are earmarked for renovation of the Academy of Sciences — we're "the only museum on this planet with a collection of cartoons! This popular display gives a glimpse into the research, including the kind that goes on in the eight scientific departments.

Both the 10K run and 5K walk/run are held on a course where you can start your morning with a race with refreshments, entertainment, and a costume parade. Costumes are a race tradition in the 5K. Cavemen, chickens, and slippery squids are just a few of the costumes you can see.

Many loyal sponsors provide additional prizes. The Miyako Hotel in Japantown offers special rates as well as a pre-race party the night before. Discount rates to fly into San Francisco to win free Southwest Airlines tickets — prizes, and in random prize drawings. To contribute race prizes, they will have special prizes. Side runners. For race updates, stay tuned to KGO-TV and the San Francisco Chronicle.



Register

Receive a \$5 discount on your membership if you register for nonmember rates (18). Race day registration information, please send an envelope to: Run to the Finish, 3929 California Street, San Francisco, CA 94118. Call the Run to the Finish.

Increase Your Income With a Gift

The Academy Pooled Income Fund can Give you:

- ◆ Lifetime income at competitive rates
- ◆ Immediate income tax savings
- ◆ Relief from capital gains taxes
- ◆ Asset diversification and money management with no fees

It gives the Academy:

- ◆ A VERY IMPORTANT FUTURE GIFT

If you are at least 55 years of age and would like to learn more about the benefits of this program, please return the following coupon or telephone the development office at 750-7216.

☐ Please give me information on the Academy Pooled Income Funds.

Name _____

Address _____

City, State _____

Zip _____ Day Phone _____

Send to: Development Office, California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118

TRADITIONAL ARTS

Turkish Carpet Weaving

November 5-13, 10 a.m. to 5 p.m., Cowell Hall

Two weavers from the DOBAG women's cooperative in western Turkey return to the Academy to demonstrate the hand-knotting techniques of woolen pile carpets.



Carpets from the Aegean region are characterized by bold geometric designs and rich colors obtained from natural dyes.

Cennet Deneri and Kiymet Acarcök, from the village of Orselli, will set up large wooden looms in Cowell Hall and work during regular museum hours. Their visit is sponsored by Return to Tradition in San Francisco, the local outlet for DOBAG carpets.

The Alphabet as Art

Steve Johnson's presentation focuses on the development of the Roman Alphabet as an art form. Calligraphy styles, as well as writing tools, have changed over the centuries, producing many imaginative interpretations of the basic letter shapes.

Saturday, Nov. 19 — 1 to 2 p.m. (African Hall)

Explore cultural traditions from around the world. Free after general admission. Call 750-7164, for more information.

ANIA ACADEMY

S



ALK, 10K RUN 27, 8:30 A.M. START

his fun-filled race and receive the ever cartoon indicating you were there for the Far Side. A family tradition for ar's race is on Sunday, November 27 your sense of humor by coming rtoon character. Gary has indicated 0th anniversary.

n creations supports the Academy's programs. Some of this year's funds ademy's Far Side of Science Gallery – et" to show Gary Larson's original vry look at nature and scientific a behind the scenes in the Academy's

egin and finish near the Academy, ark's Gourmet Coffee and conclude the nd festivities on the Music Concourse. ith prizes awarded to the best: cows, to name a few.

onal incentives to participants. The al Run to the Far Side room rates as e the run. Southwest Airlines offers for the Run and many opportunities – in the race competition, as costume Diadora Running Shoes will not only ecial deals on new Diadoras for Far ed to media sponsors KRQR-FM, le.

stration Information

nt on preregistration as an Academy ster by Nov. 18 for only \$15. Prereg- mbers is \$20 (also postmarked by the tration is \$25 for all. For entry send a self-addressed, stamped the Far Side, c/o RbodyCo Produc- nia St., San Francisco, CA 94118. Or, Far Side Hotline at (415) 387-2178.

YOUNG AUDIENCES



With drums, strings and percussion instruments from Latin America and the Caribbean, Erika Luckett and Jackie Rago of the group Little Mango take their audience on a journey through many countries and cultures. Combining songs, language and hands-on public participation, they share the variety and richness of the Latin American music traditions with their audiences.

Sunday, Nov. 20 — 1 p.m.

This family series is presented in the auditorium and is free after general admission. Call (415) 863-1719, for more information.

ADULT AND FAMILY EDUCATION

Holiday Baskets

Here's your chance to make several simple and very special baskets for the holidays. With instructor Kathleen Hubbard's help you'll have most of them made in just a few hours. You'll make a cookie basket, a paper twined basket, and a Hebi Kago or snake basket. Bring ribbon or yarn for your own holiday touch.

Sunday, Dec. 4 — 10 a.m. to 4 p.m.
Cost: \$55 members/\$65 nonmembers
(includes all materials)

The Science of Gardening

Almost all California gardeners know how to grow plants, but few know how plants grow. For this talk we will consider the science behind some of the many horticultural practices routinely used by gardeners.

A laboratory exercise will accompany the lecture. Participants will initiate experiments and then take the plants home for further observation. You're invited to bring plant materials to the class, and as time permits Dr. Lewis Feldman will discuss these items.

Tuesday, Nov. 15 — 7 to 9 p.m.
Cost: \$15 members/\$20 nonmembers

Introduction to Birding at Point Reyes

Develop and refine your ability to identify birds of various habitats while enjoying the beauty of Point Reyes. We'll stay at the historic lifeboat station out along Drake's Bay near Chimney Rock to catch a glimpse of the fall migration. You can compare avian characteristics of sea and shorebirds plus



scout out birds of the coastal scrub, freshwater ponds and riparian communities. On Saturday night

Bill Randolph will give a slide review and you'll enjoy a potluck feast. The station has dorms with bunks, a kitchen and dining area.

Nov. 19 & 20 — 9:30 a.m. Sat. to 3 p.m. Sun.
Cost: \$75 members/\$85 nonmembers,
(Doesn't include transportation, food or bedding)

For more information on these and other courses offered through the adult and family education program, call our office at 750-7100.

ACADEMY TRAVEL

River of Kings: Dresden & the Danube

Explore some of the most beautiful and important centers of eastern Europe including Prague, Dresden, the new Main-Danube Canal and Budapest with Peter Rodda as your guide. This trip combines hotel stays at the beginning and end of the trip with a seven-night cruise through the most scenic portion of the Danube. The cruise, aboard the *M.S. Heinrich Heine*, allows participants to visit several small cities and villages as well as Vienna.

June 11-26

Cost: Land and cruise fares from \$4,445-\$4,745
(based on double occupancy) plus airfare

Costa Rica

From its pristine coastline to its volcanic craters, Costa Rica's complex topography harbors some 10,000 species of plants, over 800 species of birds and countless other creatures of interest such as howler monkeys, sea turtles, golden toads, three-toed sloths and brilliantly colored butterflies. This fabulous educational adventure, led by Frank Almeda, will take you to San Jose, Monteverde, Los Inocentes, Tamarindo, Drake Bay, San Gerardo de Dota and Tortuguero National Park.

February 12-28

Cost: \$3,690 per person (based on double occupancy) plus airfare

For more information and detailed itineraries on these and other 1995 tours, please call 750-7348.

LECTURES



Sexual Selection & Human Evolution

Presented by the Academy and the L.S.B. Leakey Foundation Does human mate and sex partner selection bear a direct link to how we have evolved? Dr. Jared Diamond, an evolutionary biologist and physiologist will discuss the role of sexual selection in human evolution.

Thursday, Nov. 10 — 7:30 p.m.
\$6 members/\$8 nonmembers

The Unseen Peninsula

Co-sponsored by the Golden Gate National Park Association Experience the beauty, drama and history of this 23,000 acre nature refuge through the work of photographic artist Robert Buelteman. The lecture will be followed by a book-signing.

Tuesday, Nov. 15 — 7:30 p.m.
\$6 members/\$8 nonmembers

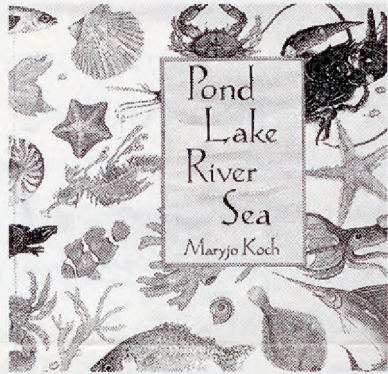
Navajo & Tibetan Sacred Wisdom

Learn how the Navajo Indians and Tibetans have preserved the Circle of the Spirit: the four universal principles for maintaining a state of holiness, wellness and social harmony. Join Peter Gold for this sound-augmented slide presentation. A book-signing will follow the lecture.

Thursday, Nov. 17 — 7:30 p.m.
\$6 members/\$8 nonmembers

Special lectures are presented in the auditorium. Use order form for tickets. For more information, call 750-7128.

THE
ACADEMY
STORE



Pond, Lake, River, Sea — See the beautiful new book by nature artist Maryjo Koch, now at the Academy Store. *Pond, Lake, River, Sea* is the exciting follow-up book to Koch's popular *Bird, Egg, Feather, Nest*. Artwork from the current book will be on display at the Academy through Jan. 2, 1995. The store will carry the book, a lovely T-shirt, and a notecard set featuring Koch's dramatic illustrations. (Book \$28, T-shirt \$15, notecards \$12.95 — plus member discount!)



NOVEMBER						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	SPECIAL EXHIBITS Birds of a Feather, through June 1995 Hands on Science, through December 1995 Witness: Endangered Species of North America, through April 23	1	2 Free Day First Wednesday of each month	3		5 Turkish Carpet Weaving, 10 a.m.-5 p.m. daily through Nov. 13 (Traditional Arts)
6 SPECIALTY TOURS Free one-hour tour at 1:30 p.m. on Tuesdays in Aquarium; Wednesdays in Life Through Time; Thursdays in Wild California. Highlight tours are offered daily.	7	8 PLANETARIUM SKY SHOWS on weekends at 11 a.m., and at 12, 1, 2, 3 and 4 p.m.	9 FISH ROUNDABOUT closed for repairs until early 1995	10 Sexual Selection and Human Evolution, 7:30 p.m. (Special Lectures)	11 LASERIUM SHOWS Thursday-Sunday, evenings, call 750-7138	12 "Kids From C.A.O.S." airs, 11 a.m. KRON-Ch 4 (Academy TV Show)
20 Little Mango, 1 p.m. (Young Audiences) 	14 SCIENCE IN ACTION General programs Sun.-Fri. at 11 a.m. Children's programs Sat. at 12:30 & 3 p.m.; this month's topic is the <i>Savanna</i> .	15 The Unseen Peninsula, 7:30 p.m. (Special Lectures) After the Big Splash, 7:30 & 9 p.m. (Planetarium Lecture)	16 Sociable Spiders, 2 & 7:30 p.m. (Members Meeting) 	17 Navajo and Tibetan Sacred Wisdom - The Circle of the Spirit, 7:30 p.m. (Special Lectures)	18	19 The Alphabet as Art, 1 p.m. (Traditional Arts)
27 RUN TO THE FAR SIDE X, 8:30 a.m. start Sky show "Extremes" ends	21	22	30 PENGUIN FEEDINGS are at 11:30 a.m. and 4 p.m. every day	24 Thanksgiving Academy is open 10 a.m. to 5 p.m. Extended sky show schedule.	25 DOLPHIN FEEDINGS are at 10:30 a.m., and 12:30, 2:30 and 4:30 p.m. every day	26
	28 The planetarium will be closed Nov. 28 through Dec. 1 for show changes	29 PLANETARIUM SKY SHOWS on weekdays at 2 p.m.		MEMBERS Please bring your membership card when you visit the Academy	PERMANENT EXHIBITS Wild California: The grandeur of California - from the southern desert to wave-hammered islands - complete with life-size elephant seals and seabird rookery display.	

DECEMBER DATES TO REMEMBER

Dec. 2 - The planetarium reopens with "The Christmas Star" (Planetarium Show)
Dec. 6 - Tellpresence and Virtual Reality, with Carol Stoker (Planetarium Lecture)

UPCOMING MEMBERS MEETINGS

Dec. 14 - Witness: Endangered Species of North America, with Susan Middleton & David Liittschwager
Jan. 11 - Geology, with Dr. Jean De Mouthe
Feb. 8 - Alaska Wilderness, with author Debbie Miller
Mar. 22 - Zambia, Zimbabwe and Botswana, with Dr. Robert Drewes

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ORDER FORM

SPECIAL LECTURES

	Qty/Mem.	Qty/Nonmem.	Total
Sexual Selection & Human Evolution / Nov. 10	x \$6	x \$8	=
The Unseen Peninsula / Nov. 15	x \$6	x \$8	=
Navajo and Tibetan Sacred Wisdom / Nov. 17	x \$6	x \$8	=
TOTAL \$			

PLANETARIUM'S B. DEAN LECTURE SERIES

	Quantity	Total
After the Big Splash: Impacts of Comets with Jupiter and Earth / Nov. 15	x \$2	=
Tellpresence and Virtual Reality / Dec. 6	x \$2	=
TOTAL \$		

DONATIONS

I would like to support the Academy with a donation. \$

PLANNED GIVING

Please send me information on Academy Pooled Income Funds.

TOTAL PAYMENT ENCLOSED

\$

PAYMENT METHOD

(Check one) ☐ Check ☐ VISA ☐ MasterCard ☐ American Express

Credit card charges gladly accepted over \$10.

Card#

Exp. Date

Signature

MAKE CHECK PAYABLE TO: C.A.S. and mail with this coupon form to:

Membership Office, Ticket Services
California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118
Daytime Phone

Include a self-addressed, stamped envelope for each series to which you subscribe.
No refunds/exchanges.

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